

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 14 and 15, add claims 21-26, and amend claims 1, 9, and 20 as follows.

1. (Currently Amended) A vessel for traveling on water, comprising:

a hull; and

a keel comprising a member depending from the hull, the member comprising two limbs each depending from a respective lateral side of the hull, the two limbs defining at least in part an enclosed flow path extending in a bow-to-stern direction, the enclosed flow path being configured to allow water incident on the vessel to flow over inner and outer surfaces of the two limbs, wherein the two limbs each have a foil surface which is angled to generate in use a component of hydrodynamic force directed away from the enclosed flow path when there is a net flow of water incident in the bow-to-stern direction, each limb having ~~an operational configuration in which the inner and outer surfaces are sufficiently continuous to maintain flow over a forward edge and a rearward edge,~~ the inner and outer surfaces extending between the forward and rearward ends of the limb without flow through the limb edges, wherein each of the inner and outer surfaces is continuous over its entire length between the forward and rearward edges, and wherein the keel further comprises a ballast bulb disposed at a lowest part of the keel.

2. (Previously Presented) The vessel of claim 1, wherein at least one limb of the two limbs comprises a portion having a symmetrical foil section.

3. (Previously Presented) The vessel of claim 1, wherein at least one limb of the two limbs comprises an asymmetric foil section.

4. (Previously Presented) The vessel of claim 1, wherein the angle of the foil surface of at least one limb of the two limbs is variable.

5. (Previously Presented) The vessel of claim 4, wherein at least one limb of the two limbs is of variable camber.

6. (Previously Presented) The vessel of claim 5, wherein the member comprises a flap being movably attached to one of the two limbs.

7. (Previously Presented) The vessel of claim 5, wherein a portion of at least one limb of the two limbs is moveable.

8. (Previously Presented) The vessel of claim 1, wherein the two limbs each comprise a substantially straight portion.

9. (Currently Amended) The vessel of claim 8, wherein the ~~member comprises two~~ limbs comprise a pair of substantially straight limbs connected together to form a V-shape as viewed in the bow-to-stern direction with a portion of the hull completing ~~the~~ a loop to form the enclosed flow path.

10. (Previously Presented) The vessel of claim 1, wherein the two limbs are substantially curved.

11. (Previously Presented) The vessel of claim 1, wherein the two limbs are symmetrically disposed on either side of a central, longitudinal axis of the hull.

12. (Previously Presented) The vessel of claim 1, wherein the two limbs are directed inwards toward the hull where they depend from the hull.

13. (Previously Presented) The vessel of claim 12, wherein the two limbs are substantially perpendicular to the hull at the point where they meet the hull.

14. (Cancelled)

15. (Cancelled)

16. (Previously Presented) The vessel of claim 1, wherein at least one limb of the keel has a part having a sharp or small radius leading-edge.

17. (Previously Presented) The vessel of claim 1, wherein at least one limb of the two limbs has a part having a leading edge which is locally swept relative to a central, longitudinal axis of the hull.

18. (Previously Presented) The vessel of claim 17, wherein longitudinal distance between the leading edge of the part and a rearmost part of the hull decreases with increasing distance from the hull.

19. (Previously Presented) The vessel of claim 1, wherein each limb of the two limbs has a lower part which is longitudinally offset relative to an upper part thereof.

20. (Currently Amended) The vessel of claim 19, wherein the lower ~~portion~~ part of each limb of the two limbs is offset relative to the upper part towards a rear part of the hull.

21. (New) A vessel for traveling on water, comprising:
a hull; and

a keel comprising a member depending from the hull, the member comprising two limbs each depending from a respective lateral side of the hull, the two limbs defining at least in part an enclosed flow path extending in a bow-to-stern direction, the enclosed flow path being configured to allow water incident on the vessel to flow over inner and outer surfaces of the two limbs, wherein the two limbs each have a foil surface which is angled to generate in use a component of hydrodynamic force directed away from the enclosed flow path when there is a net flow of water incident in the bow-to-stern direction, each limb having a forward edge and a rearward edge, the inner and outer surfaces extending between the forward and rearward edges, wherein each of the inner and outer surfaces is continuous over its entire length between the forward and rearward edges, wherein the two limbs each comprise a substantially straight portion, and wherein the two limbs comprise a pair of substantially straight limbs connected together to form a V-shape as viewed in the bow-to-stern direction with a portion of the hull completing a loop to form the enclosed flow path.

22. (New) A vessel for traveling on water, comprising:

a hull; and

a keel comprising a member depending from the hull, the member comprising two limbs each depending from a respective lateral side of the hull, the two limbs defining at least in part an enclosed flow path extending in a bow-to-stern direction, the enclosed flow path being configured to allow water incident on the vessel to flow over inner and outer surfaces of the two limbs, wherein the two limbs each have a foil surface which is angled to generate in use a component of hydrodynamic force directed away from the enclosed flow path when there is a net flow of water incident in the bow-to-stern direction, each limb having a forward edge and a rearward edge, the inner and outer surfaces extending between the forward and rearward edges, wherein each of the inner and outer surfaces is continuous over its entire length between the forward and rearward edges, and wherein the two limbs are substantially curved

23. (New) A vessel for traveling on water, comprising:

a hull; and

a keel comprising a member depending from the hull, the member comprising two limbs each depending from a respective lateral side of the hull, the two limbs defining at least in part an enclosed flow path extending in a bow-to-stern direction, the enclosed flow path being configured to allow water incident on the vessel to flow over inner and outer surfaces of the two limbs, wherein the two limbs each have a foil surface which is angled to generate in use a component of hydrodynamic force directed away from the enclosed flow path when there is a net flow of water incident in the bow-to-stern direction, each limb having a forward edge and a rearward edge, the inner and outer surfaces extending between the forward and rearward edges, wherein each of the inner and outer surfaces is continuous over its entire length between the forward and rearward edges, and wherein at least one limb of the two limbs has a part having a leading edge which is locally swept relative to a central, longitudinal axis of the hull.

24. (New) The vessel of claim 23, wherein longitudinal distance between the leading edge of the part and a rearmost part of the hull decreases with increasing distance from the hull.

25. (New) A vessel for traveling on water, comprising:

a hull; and

a keel comprising a member depending from the hull, the member comprising two limbs each depending from a respective lateral side of the hull, the two limbs defining at least in part an enclosed flow path extending in a bow-to-stern direction, the enclosed flow path being configured to allow water incident on the vessel to flow over inner and outer surfaces of the two limbs, wherein the two limbs each have a foil surface which is angled to generate in use a component of hydrodynamic force directed away from the enclosed flow path when there is a net flow of water incident in the bow-to-stern direction, each limb having a forward edge and a rearward edge, the inner and outer surfaces extending between the forward and rearward edges, wherein each of the inner and outer surfaces is continuous over its entire length between the forward and rearward edges, and wherein each limb of the two limbs has a lower part which is longitudinally offset relative to an upper part thereof.

26. (New) The vessel of claim 25, wherein the lower part of each limb of the two limbs is offset relative to the upper part towards a rear part of the hull.